

"Made available under NASA sponsorship
in the interest of early and wide dis-
semination of Earth Resources Survey
Program information and without liability
for any use made thereof."

E 7.4 - 1 0.7 5.2
CR 139992

BOLIVIAN PARTICIPATION IN THE INVESTIGATION
AND ANALYSIS OF EARTH RESOURCES EXPERIMENT (EREP)

(E74-10752) BOLIVIAN PARTICIPATION IN THE INVESTIGATION AND ANALYSIS OF EARTH RESOURCES EXPERIMENT (EREP Progress Report, Sep. - (Servicio Geológico de Bolivia, La Paz.) 4 p HC \$4.00 CSCL 05B	N74-32778 Unclas G3/13 00752
---	--

SR - 571

PERIOD SEPTEMBER - DECEMBER 1973

Dr. Carlos E. Brockmann
PRINCIPAL INVESTIGATOR

Servicio Geológico de Bolivia
Casilla 2729
La Paz - Bolivia

1.0 INTRODUCTION

The ERTS-BOLIVIA Program, in the July-September report, gave a general outline of the activities carried on with the products facilitated to us by N.A.S.A. corresponding to experiments S-190 A, S-190 B and S-192.

After a preliminary study of the first photographs in December, 1973, corresponding to experiment S-190 A of the Santa Cruz - Rogaguado Lake zone, we find that investigations proposed in our previous report will be greatly limited by the fact that we were remitted only part of the photographs. However, this information will be used in a preliminary way in cartography, geology, agronomy and hydrology.

2.0 MULTIDICIPLINARY PROGRAM

2.1 Cartography

2.1.1 Cartographic evaluation of the multispectral photographs in relation to the processed ERTS images of the area of Trinidad-Santa Ana

2.1.3 Preparation of a photomap of the area of Santa Cruz, based on the aforementioned evaluations.

2.2 Geology

2.2.1 Evaluation of bands to study their applicability in geology.

2.2.2 Use and evaluation for the preparation of geomorphological maps.

2.2.3 Use and application to structural mapping from the point of view of petroleum exploration.

2.2.4 Evaluation in the preparation of lithological maps.

2.3 Agronomy

2.3.1 Preparation of maps of soil classification.

2.3.2 Study and evaluation of land use.

- 2.3.3 Study and evaluation in forestal mapping.
- 2.4 Hydrology
 - 2.4.1 Study and evaluation in the preparation of drainage outlines.
 - 2.4.2 Preparation of maps of river basins and sub-basins.
 - 2.4.3 Application in the bringing up to date of the course of the Mamoré River.

3.0 INVESTIGATION

- 3.1 Study and evaluation of the EREP (S-190A) data in relation to the information obtained from the ERTS images processed in volume in black and white and in color composites.
- 3.2 Evaluation of the EREP data in relation to aerial photography, photomosaics and photoindexes of the area of Santa Cruz de la Sierra.
- 3.3 Evaluation of the EREP data with the multispectral aerial photography.

4.0 WORK PERFORMED

- 4.1 Reproduction on contact of the S-190 A photographs, on 1, 2, 5 and 6 bands.
- 4.2 Preparation of 70 mm. negatives to make enlargements.

5.0 PROBLEMS ENCOUNTERED FOR THE DEVELOPMENT OF THE PROGRAM

Because the S-190 A photographs corresponding to SL-2, cover a zone where there is only sedimentary rock, we did not carry out the programs listed in 1.2.1.3., 1.2.1.5., 1.2.1.7., and 1.2.1.9. as listed in the previous report.

To this we must add that N. A. S. A. did not send to the investigators, the information obtained by SKYLAB of the respective test areas.

6.0 CONCLUSIONS

After a rapid interpretation, from the point of view of structural geology, of the EREP photographs, which are characterized by being of extended coverage and great height, we find that they permit us to interpret and identify with great clarity, anticlinal structures in the area of Santa Cruz.